

SHEVCHENKO, V. S.

Roller Bearings

Statistical method of control in forging balls for roller bearings, Podshipnik, No. 6, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, October 1952 Unclassified

1. N. P. SOKOV, Eng.
2. USSR (600)
4. Bearings (Machinery)
7. Introducing speed technology in bearing production. Podshipnik no. 12. 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

SOKOV, N.T.; LOKTIONOV, M.I.

[Swine breeding at the 1958 Exhibition] Svinovodstvo na Vystavke
1958 goda. Moskva, Gos.izd-vo selkhoz lit-ry, 1958. 36 p.
(Swine) (MIRA 12:3)

ASADULLIN, A.Z., inzh.; SOKOV, V.A., inzh.

Discrete system of program control of machine tools. Vych. tekhn.
[MVTU] no.3:238-252 '63. (MIRA 17:2)

MAGAZINER, V.V.; ROZENBLAT, M.M.; SOKOV, V.I.

Design of hydropneumatic safety appliances for mechanical sheet
stamping presses. Kuz.shtam. proizv. 3 no.1:23-28 Ja '61.
(MIRA 14:1)

(Power presses—Safety appliances)
(Sheet-metal work)

IZOTOV, Ye.N.; ROZENBLAT, M.M.; SOKOV, V.I.

Friction clutches used as safety devices. Kuz.-shtam. proizv.
3 no. 2:25-28 F :61. (MIRA 14:1)
(Power presses—Safety appliances)
(Clutches (Machinery))

ROZENBLAT, M.M.; SOKOV, V.I.

Testing presses by means of hydraulic loading devices. Kuz.-shtam.
(MIRA 16:1)
proizv. 4 no.12:26-29 D '62.
(Power presses—Testing) (Oil hydraulic machinery)

VECHTONOV, M.I., inzh.; KUDRYAVTSEV, V.A., inzh.; MALKES, D.A., inzh.; OSTROVSKIY, G.I.; POVERENNYY, L.D.; SUSHKOV, P.M., inzh.; TYULENEV, N.Z., inzh. Prinimali uchastiye: GALYAKOVA, N.S., inzh.; PUTEYEVA, N.P.; IZRAYLOVICH, Ye.A., inzh.; MARCENKO, G.A., inzh.; MALYGINA, Z.S.; SOKOLOVA, Ye.A.; SOKOV, V.N., inzh.; TARASOVA, S.N.; TASHAYEV, A.L., inzh.; FILIMONOV, S.V.; DRALICH, K.F., inzh., nauch. red.; NOVITCHENKO, K.M., inzh., nauchnyy red.; SIMAKOV, S.N., inzh., nauchnyy red.; FAKTOROVICH, Yu.A., kand. tekhn. nauk, nauchnyy red.; STUPIN, Ye.N., otv. red.; LUTOV, N.S., red.; IVANOV, V.S., red.; BAGUZOV, N.P., glav. red.; VOLCHEGORSKIY, M.S., zam. glav. red.; DOBRYNIK, S.N., red.; NAZAROV, I.A., red.; KOLESNIKOV, S.I., red.; MEL'NIKOV, N.P., red.; SUSNIKOV, A.A., red.; STAROVEROV, I.G., red.; LYTKINA, L.S., red. izd-va; GORDEYEV, P.A., red. izd-va; OSENKO, L.M., tekhn. red.

[Handbook for the designer of industrial, residential, and public buildings and structures; organization of construction and execution of building and assembly operations. Industrial construction] Spravochnik proektirovshchika promyshlennyykh, zhilykh i obshchestvennykh zdanii i scoruzhenii; organizatsiia stroitel'-stva i proizvodstvo stroitel'no-montazhnykh rabot. Promyshlennoe stroitel'stvo. Pod red. P.M. Sushkova. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 372 p.
(MIRA 15:2)

(Industrial buildings)

SORKIN, Ya.G.; SOKOV, Yu.F.; SANNIKOV, I.A.; MIKITINA, L.G.

Operation of an assembly for catalytic reforming on a
platinum catalyst. Khim. i tekhn. topl. i masei 5 no. 11:8-
11 N '60. (MIRA 13:11)
(Cracking process)

SOKOV, Yu.F.; NIKITINA, L.G.

Economic effectiveness of catalytic reforming units with a
platinum catalyst. Khim. i tekhnicheskaya maslo 6 no.7:31-34
Jl '61. (MIRA 14:6)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke
nefti.

(Petroleum--Refining)
(Platinum)

SOKOV, Yu.F.; PUTILOVA, Z.D.; KIRILLOV, T.S.

Using rotor-disk contactors to extract the benzene by diethylene
glycol. Trudy Bash NIINP no.5:201-205 '62. (MIRA 17:10)

SOKOV, Yu.F.; PUTILOVA, Z.D.; KASTANOS, A.Z.; VAKULENKO, A.A.

Using a rotor-disk contactor to extract aromatic hydrocarbons
with diethylene glycol. Trudy BashNII NP no.7:108-113 '64.
(MIRA 17:9)

S/081/63/000/004/036/051
B194/B160

AUTHORS: Sokov, Yu. F., Putilova, Z. D., Kirillov, T. S.

TITLE: The use of rotory-disc contactors for the diethylglycol extraction of benzene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 522, abstract 4P167 (Tr. Bashkirsk. n-i. in-t po pererabotke nefti, no. 5, 1962, 201 - 205)

TEXT: Results are given of experiments, performed in the BashNII NP, on the diethylglycol extraction of benzene from a fraction of the platforming product on rotory disc extractors 50 and 80 mm diam. The vertical cylindrical shell of the extractor is divided into a number of sections formed by the series of fixed stator rings. In the centre of each section is a flat horizontal disc which is rotated by a shaft passing along the vertical axis of the shell. Height of the extractor is 2 m., the disc pitch is 10 mm., the shaft speed 400 r.p.m. for the 50 mm extractor and 150 r.p.m. for the 80 mm one. The extraction was carried out consecutively in two extractors: in the first the raw material was extracted with fresh diethylglycol and in the second the extracted phase obtained from the first extractor was con-

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S/081/63/000/004/036/051
B194/B180

The use of rotary disc contactors...

tacted with the recycled extract. The raffinate phase from the top of the second extractor was mixed with the raw material and passed to the bottom of the first extractor. The final raffinate phase was withdrawn from the top of the first extractor and the final extracted phase from the bottom of the second extractor. The total output of the extractor for both phases was

17-20 m³/m³. Properties of a typical raw material: boiling range 57-134°; aromatic hydrocarbons - 22.2%, including 9.5% benzene, 9.2% toluene and 3.5% xylenes. In the extraction with 800% (calculated on the crude material) diethylglycol, which contained 4-5% of water, at 85-90° and 100 vol% of the recycled extract each 100 parts of crude yielded 79 parts of the raffinate phase containing 2.5% aromatic hydrocarbons and 21 parts extract containing 97% aromatic hydrocarbons. The extract after purification with sulfuric acid was distilled in the laboratory in a column with 20 theoretical plates and benzene satisfying the ГОСТ 8448-57 (GOST 8448-57) specification was obtained. [Abstracter's note: Complete translation.]

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SOKOV, Yu.F.; NIKITINA, L.G.

Economic efficiency of catalytic-reforming units with platinum catalysts. Trudy Bash NIINP no.5:99-104 '62. (MIRA 17:10)

Using an alumino-platinum catalyst under plant conditions. Ibid.:104-109

SOKOV, Yu. I.

MIRSALEYEV, Salam Beyuk-Aga oglu; KHARIK, Veniamin Fayvushevich; SOKOV, Yu.I.,
redaktor; AL'TMAN, T.B., redaktor izdatel'stva:

[General overhauling of oil and gas wells] Kapital'nyy remont
neftianykh i gazovykh skvazhin. Baku, Azerbaidzhanskoe gos.izd-vo
neft. i nauchno-tekhn.lit-ry, 1957. 255 p. (MLRA 10:9)
(Gas wells) (Oil wells)

С. Р. А. 1982

Коэффициенты сопротивления грунта
воде и нефти в скважинах на базах
нефтяных и газовых месторождений
Бакинской и Гяндзской нефтяных баз
на территории Азербайджанской ССР

1. Азербайджанский институт нефти им. Н. Азизбекова.

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652130011-1

Effect of well structure on extraction work. Izv. vys. ucheb. zav.;

neft i gaz N 2:114-16 '65. (MFA 18:3)

I. Azerbaydzhanckiy institut nefti i khimii im. M. Azizbekova.

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652130011-1"

SOKOV, Yu.I.; SAPOZHOK, V.M.

Effect of the withdrawal of liquid on the success of water exclusion operations. Izv. vys. ucheb. zav., neft' i gaz 8 no.6:117-119 '65.
(MIRA 18:7)
1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

SOKOV, Yu.F.; PUTILOVA, Z.D.; VAKULENKO, A.A.; ZUBAREV, N.P.

Extracting aromatic hydrocarbons using a rotor-disk contractor.
Trudy BashNII NP no.6:207-217 '63. (MIRA 17;5)

SOKOVA, A. A. ~~doe~~ Cand Med Sci -- (diss) "Therapeutic importance of ~~foot-free~~ ^{lockless} ^{restorative} apparatuses in the recovery and ~~the~~ early ^I residual home period after acute anterior poliomyelitis." Mos, 1957.

15 pp 19 cm. (Second Moscow State Medical Inst im I.V. Stalin),

250 copies

(KL, 21-57, 107)

-118-

ACCESSION NR: AT4026436

S/2589/62/000/059/0101/0108

AUTHOR: Sokova, A. A.

TITLE: Sorting of ammonia molecules by means of an electric field

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy* institutov Komiteta, no. 59 (119), 1962. Issledovaniya v oblasti izmereniya chastoty* (Investigations in the field of frequency measurement), 101-108

TOPIC TAGS: frequency measurement, molecular generator, ammonia generator, ammonia amplifier, ammonia molecule sorting

ABSTRACT: In molecular generators and amplifiers which operate on a beam of ammonia molecules, the electric field sorts out the molecules present in the upper inversion level. The need for measurements of the natural population of the inversion sublevels derives from the fact that, at room temperature, the two energy levels determining the radio frequency are about identically inhabited. The present paper deals with the calculation of three systems for electrical sorting of ammonia molecules in a beam according to inversion levels. It is shown that, when estimating the quality of a sorting system designed for a molecular generator, the following considerations are fundamental: 1) To obtain maximum generation intensity it is essential that the number of active molecules

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ACCESSION NR: AT4026436

in the resonator be maximal; that is, that the coefficient α tend toward unity. 2) To obtain maximum stability for the frequency of the molecular generator oscillations it is essential that the beam of ammonia molecules which pass through the resonator be, as far as possible, parallel; thus, the angle at which the molecules enter the resonator must be minimal. In the light of these considerations, the author has considered: 1) a $2n$ -pole sorting system (2-pole capacitor with an axis of symmetry Z (Fig. 1)); 2) a ring-type sorting system (a beam of NH_3 molecules travels along the axis of a system of rings Z; axis Z is the axis of symmetry of a periodic electrostatic field; the potential of the even rings is positive, that of the odd rings is negative (Fig. 2)); a bifilar helical sorting system (Fig. 3). The study shows that in the case of a $2n$ -pole capacitor the number of upper inversion level molecules entering the resonator increases as a function of decreasing system diameter and increasing pole number and diameter. However, as the number of poles and their diameter increase, the molecules of the lower inversion level are deprived of the possibility of leaving the system--a fact which disrupts the normal operation of the system. Consequently, it is advisable to select a small diameter for the poles. From these and certain other considerations, a 6- or 8-pole system, with small diameter and length greater than for quadrupoles, is recommended. The results obtained for the different sorting systems, under optimal conditions, indicate that, from the point of view of sorting, their efficiency is approximately equal. However, the calculations for the rings and particularly for the spirals are approximate and somewhat low,

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ACCESSION NR: AT4026436

and this fact must be taken into consideration when making comparisons. Orig. art. has:
24 formulas and 5 figures.

ASSOCIATION: Komitet standartov, mer i izmeritel'nykh priborov (Committee for
Standards, Measures and Measuring Instruments)

SUBMITTED: 00Aug60 DATE ACQ: 24Apr64 ENCL: 03

SUB CODE: PH,AS NO REF SOV: 002 OTHER: 002

Card 3/6

SOKOVA, E. V., Candidate Med Sci (diss) -- "Therapeutic gymnastics for breaks in the bones of the wrist and fingers". Moscow, 1959. 12 pp (First Moscow Order of Lenin Med Inst im I. M. Sechenov), 200 copies (KL, № 23, 1959, 175)

SOKOVA, I. T.

Cryoscopic investigations of lime-sugar-water systems.
I. A. Sheka, M. M. Polyachenko, and I. I. Sokova. *Trudy Teknol. Inst. Priborostroy. im. A. I. Miskoyama* 16,

227-34(1950). Solns. contg. sugar (0.1, 0.2, 0.3 and 0.4 mol./kg.) and varying amts. of CaO (from 0 to satn.) were investigated cryoscopically. The f.p. was initially rapidly reduced in 0.1M solns. of sucrose when CaO was introduced, but was more slowly depressed with increasing proportions of CaO to sucrose. The f.p. curve of solns. contg. concns. of 0.2, 0.3, and 0.4 mol./kg., with the addn. of increasing units. of lime, was initially reduced, terminating at a min. and then increasing. The cryoscopic curves obtained suggested that low concns. of sugar and lime in soln. form the most part form $\text{CaH}_2\text{O}_1\text{CaOH}$, and that larger concns. form this compd. and 2 more complicated compds. such as $(\text{C}_6\text{H}_{12}\text{O}_6)_2\text{Ca}$ or $\text{C}_6\text{H}_{12}\text{O}_6\text{Ca-O-CaC}_6\text{H}_{12}\text{O}_6$. These compds. in the soln. are solvated by the water.

E. A. McConib

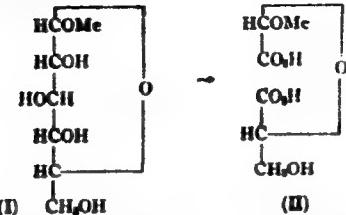
3

Ca

10

PROCESSES AND PROPERTIES INDEX

Cleavage of the C chain of α -methyl D-glucopyranoside
in concentrated sulfuric acid. V. I. Ivanov and K. M.
Beloye. Doklady Akad. Nauk S. S. R. 42, 179-81
(1944); Compt. rend. acad. sci. U. R. S. S. 42, 175-
7 (1944) (in English).—Oxidation by atm. O of α -Me D-
glucopyranoside (I), in $\text{NH}_3\text{-Cu}(\text{OH})_2$ soln. proceeds ac-
cording to the equation



Isolation of II is effected by means of its Sr salt which by
hydrolysis and subsequent oxidation with Br is converted
into oxalic and glyceric acids. Since I is an analog of the
structural unit of cellulose it is conjectured that in the
process involving the soln. of the latter in Schweitzer's
reagent similar oxidations take place. L. Kuhn

ASG-SLA METACURICAL LITERATURE CLASSIFICATION

SEARCHED					SERIALIZED					INDEXED										SEARCHED									
SEARCHED					SERIALIZED					INDEXED					SEARCHED					SERIALIZED					INDEXED				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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SOKOVA, K. M.

USSR/Chemistry - Glycols Chemistry - Alcohols

Nov 48

"Oxidation-Reduction of Alpha-Glycols and Polyatomic Alcohols Through the Effect of an Ammonia Solution of Silver Hydroxide," V. I. Ivanov, K. M. Sokova, 1 $\frac{1}{2}$ pp

"Dok Ak Nauk SSSR" Vol LXIII, No 3

Concludes that, during action of an ammonia solution of silver hydroxide on alpha-glycols and polyatomic alcohols, oxidation occurs in carbon atoms containing hydroxyl groups up to a carboxyl group with a simultaneous rupture in the carbon-carbonic bond. Reaction is negative in beta-glycols. Submitted by Acad A. N. Nesmeyanov 2 Jul 48.

PA 55/49T18

Sokov, K.M.

✓ Organic oxygen compounds from oxidizing cracking in the vapor phase. I. Aldehydes, ketones, and phenols from the gasoline fractions of primary cracking. S. F. Vasil'ev, K. M. Sokov, and R. I. Ginzburg. Trudy Inst. Nefti, Akad. Nauk S.S.R. 4, 52-65 (1954). The distillates obtained after oxidizing cracking of the kerosene fractions of Emben petroleum were studied. The gasoline fractions were treated with an aq. soln. of NaHCO₃ to ext. acids, followed by treatment with a satd. aq. soln. of NaHSO₄, extd. with Et₂O, and treated again with NaHCO₃ until the soln. was alk. Steam distn. and salting out the distillate with Na₂SO₄ followed by fractionation gave the following aldehyde and ketone fractions: 15% b. 35-49°, 29.2% b. 54.7-7.7°, and 24.6% b. 73.2-3.7°. It was established that the gasoline distillates contained 0.43% carbonyl compds., mainly acetone and Et Me ketone accompanied by some propionaldehyde, butyric, valeric, and caproic aldehydes, and 0.26% phenols, mainly cresols. M. Charmandarian

John
JPM

(2) LFH

SOKOVA, K. M.

✓ 1990. ORGANIC OXYGEN COMPOUNDS FORMED IN THE PROCESS OF VAPOUR PHASE
OXIDATION CRACKING. PART 2. NEUTRAL AND ACID PRODUCTS IN REACTION WATER
FROM OXIDATION REFORMING. Vasil'ev, S.F., Sokova, K.M. and Ginzburg, R.I.
(Trud. Inst. Neftei Trans. Inst. Petrol. Acad. Sci. U.S.S.R.), 1955, vol. 6,
(79-84). The following were found dissolved in the reaction water after the
reforming of primary gasoline from the oxidation cracking of kerosine from
Emba crudes. 8.4% of neutral products consisting mainly of methyl alcohol
and acetone, also of formaldehyde, acetaldehyde, methylethylketene and ethyl
alcohol and 1.4% of acids, mainly acetic, formic and propionic acids. (L).

8
I-H-N
②

fha
mt

AUTHOR: Bashkoriv, A.N., Kamzolkin, V.V., Sokova, K.M., and
Andreyeva, T.P. *65-4-2/12*

TITLE: Method of determination of primary and secondary higher alcohols of the fatty series in their mixtures. (Metod opredeleniya pervichnykh i vtorichnykh vyssikh spirtov zhirmogo ryada v ikh smesyakh)

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masei" (Chemistry and Technology of Fuels and Lubricants) 1957, No. 4, pp. 7-11 (U.S.S.R.)

ABSTRACT: During studies of higher alcohols produced by a direct oxidation of paraffinic hydrocarbons it was found difficult to determine the content of primary and secondary alcohols, as methods described in the literature (2, 3, 4) were found unsatisfactory when the number of carbon atoms in the molecules exceeds eight. The method is based on some regularities in the oxidation reaction of higher n-aliphatic alcohols with chromic acid in glacial acetic acid. The accuracy of the method on average 5% (Table). There is one table and 6 references including 3 Slavic.

ASSOCIATION: Petroleum Institute Ac.Sc.U.S.S.R. (Institut Nefti AN SSSR)

AVAILABLE:

SOW5..58-6-3/13

AUTHORS: Bashkirov, A. N.; Kamzolkin, V. V.; Sokova, K. M. and
Andreyeva, T. P.

TITLE: The Position of Hydroxyl Groups in Alcohols Prepared
During the Liquid Phase Oxidation of n-Paraffin Hydro-
carbons. (O. poizhenii gidroksil'nyy gruppy v spirtakh,
poluchayemykh pri zhidkofaznom okislenii n-parafinovykh
uglevodorodov).

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.6.
pp. 10 - 16. (USSR)

ABSTRACT: When investigating the position of the hydroxyl groups
in the alcohol molecule, the authors used the method
of oxidizing alcohols with potassium dichromate in a
medium diluted with sulphuric acid (Ref.4). During the
oxidation of primary alcohols, carboxylic acids, with
the same number of C-atoms as contained in the initial
alcohol, are obtained. During the oxidation of secondary
alcohols, the C-C bonds are split at the hydroxyl groups,
and carboxylic acids with a lower number of C atoms in the
molecule are formed. Therefore, it is possible to
determine the position of the hydroxyl groups according to
the composition of the acids. Some side reactions take
place when the process is carried out in sulphuric acid
at increased temperatures. The authors investigated the

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SOU/65-58-6-3/13

The Position of Hydroxyl Groups in Alcohols Prepared During the Liquid Phase Oxidation of n-Paraffin Hydrocarbons.

oxidation of individual aliphatic alcohols with varying positions of the hydroxyl group (4-tetradecanol and 7-hexadecanol) with subsequent identification of the acids. The method of F. Kraft (Ref.4) was slightly modified, and distillations were carried out according to the method described by L. K. Obukhova (Ref.5). The height of the rectification column was 40 cm and the diameter 1.4 cm. A mixture of hydrocarbons, from which the olefins and aromatic hydrocarbons had been separated, was used as carrier. The content of esters in the fractions was calculated on the basis of the ester number of the fraction. On the basis of the composition of the acids it was possible to conclude that oxidation of the alcohols occurs mainly at the hydroxyl groups. Discrepancies in the rule of Paoz occur at increasing distances of the hydroxyl groups from the end hydrocarbon atom. The neutral oxygen-containing compounds (ketones), obtained during the oxidation, were subjected to second oxidation reaction. The total yield of acids ≈ 96%. The investigated fractions of alcohols were concluded to be a mixture of isomers of secondary n-hexadecanols in which the isomers are contained in equal molar

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SC/66-58-6-3/13

The Position of Hydroxyl Groups in Alcohols Prepared During the Liquid Phase Oxidation of n-Paraffin Hydrocarbons.

quantities. Experimental details on the oxidation of the individual alcohols are given. Tables 1 and 2 give the composition of oxidation products of alcohols and of their distillates; the distribution of acids is shown in Table 3. During experiments on defining the position of the hydroxyl groups in the alcohols, a fraction of alcohols boiling between 125.0 - 126.8, with an hydroxyl number of 229.5, was oxidized. The neutral oxygen-containing compounds were subjected to a second oxidation reaction. Results are given in Tables 4 and 5. These experiments showed that during the oxidation of n-paraffin hydrocarbons in the liquid phase, n-secondary alcohols are formed. The hydroxyl groups of these alcohols are situated at different C atoms of the molecule. It was also found that the reactivity of the secondary C atoms of molecules of higher n-paraffin hydrocarbons to oxygen is practically identical. There are 5 Tables and 8 References: 4 Soviet, 2 German, 1 English and 1 Dutch.

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ASSOCIATION: Petroleum Institute, AS USSR (Institut nafti AN SSSR)

SOKOVA, K.M.

20-1-42/58

AUTHORS:

Bashkirov, A. N., Kamzolkin, V. V.,
Sokova, K. M., Andreyeva, T. P.,

TITLE:

On the Problem of the Oxidation Mechanism of Paraffinic Hydrocarbons in the Liquid Phase (K voprosu o mekhanizme zhidkofaznogo okisleniya parafinov, kh uglevodorodov)

PERIODICAL:

Doklady AN SSSR, 1958, Vol. 118, Nr 1, pp. 149-152 (USSR)

ABSTRACT:

This process is complicated and consists of a number of reactions taking place in parallel or successively. It is considered an established fact that this oxidation under mild conditions proceeds to water and carbonic acid through intermediate products of an incomplete oxidation (peroxides, alcohols, ketones, acids and others). A complicated mixture of oxygen-containing products develops. In an earlier paper (reference 1) the authors worked out the synthesis of higher alcohols of the aliphatic series by direct oxidation of paraffinic hydrocarbons in the presence of boric acid. The mechanism and the mechanism of individual stages has still to be determined. For this purpose the oxidation of a number of individual hydrocarbons was carried out and the composition of the alcohols produced was studied. A nitrogen-oxygen mixture (3,0 - 3,5% O₂) with addition of 5% boric acid (calculated on the initial hydrocarbon) under atmospheric pressure was

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On the Problem of the Oxidation Mechanism of Paraffinic Hydro-
carbons in the Liquid Phase.

20-1-42/58

and does not lead to positive results. The methods known in publications (references 3, 4) proved to be useless. In order to solve this problem the authors worked out a special method of the quantitative determination of primary and secondary alcohols. For this purpose alcohols were by means of chromic acid oxidized in the medium of glacial acetic acid. The accuracy of this method is about 5%. From the given results of analysis follows that predominantly secondary alcohols form in the reaction studied here (87,7 - 88,7 mol.%). The interaction of oxygen with the molecules of the paraffinic hydrocarbons of normal structure mainly takes place at the secondary carbon atoms. There are 4 tables, and 5 references, 3 of which are Slavic.

ASSOCIATION:

Petroleum Institute AS USSR (Institut nefti Akademii nauk
SSSR)

PRESENTED:

June 26, 1957, by A.V. Topchiyev, Academician

SUBMITTED:

June 26, 1957

AVAILABLE:
Card 3/3

Library of Congress

AUTHORS: Bashkirov, A. N., Kamzolkin, V. V. Sokova, K. M., 2o-119-4-21/6o
Andreyeva, T. P.

TITLE: The Composition of Alcohols Produced by Liquid Phase Oxydation of n-Paraffinic Hydrocarbons (O sostave spiritov, poluchayushchikhsya pri zhidkofaznom okislenii n-parafinovykh uglevodorodov)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 4, pp. 705-707 (USSR)

ABSTRACT: Teh investigation of the chemical composition and the structure of higher aliphatic alcohols is very important for the explanation of their formation mechanism as well as for the selection of the right method for their rational exploitation. In the present paper the authors occupied themselves with the hydroxyl group in the alcohol molecule. They paid special attention to the method of oxydation of alcohols with sodium bichromate and with sulfuric acid. The weight ratios between alcohol and sodium bichromate were 1:3, the quantity of the diluted sulfuric acid and of alcohol 10:1. The oxidat ion was carried out at different temperatures. The existence of certain methyl ethers was found in single fractions. The

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The Composition of Alcohols Produced by Liquid Phase
Oxydation of n-Paraffinic Hydrocarbons

20-119-4-21/60

computation could be carried out also according to the
following formula:

$$X = \frac{A(M-1)-107.9(100-A)}{14A} \cdot 100$$

whereby X denotes the content of acid C_n (mol.-%); A denotes the content of silver in the existing silver salt (percentage by weight); M denotes the molecular weight of the acid C_{n+1} . The numerical empirical data prove that this method of oxidation of alcohols can be used very well for the detection of the position of the hydroxyl group. The experimental results show furthermore that the alcohols obtained form a binary mixture of n-hexadecyl alcohols. The quantity of various alcohol molecules in this group is equal. Comprisingly was said that the alcohols produced by the oxidation of n-paraffinic hydrocarbons are mainly of secondary nature and represent a mixture of various isomeric substances. The reactivity of the atoms of the molecules of higher paraffin hydrogens of normal structure does not display any considerable differences and is equal in comparison to oxygen. This is the condition for the production of isomeric substances

Card 2/3

The Composition of Alcohols Produced by Liquid Phase
Oxydation of n-Paraffinic Hydrocarbons

20-119-4-21/60

of secondary alcohols during the oxidation process of hydrocarbons in liquid state.
There are 1 table and 5 references, 4 of which are Soviet.

ASSOCIATION: Institut nefti Akademii nauk SSSR (Petroleum Institute of the AS USSR)

PRESENTED: December 14, 1957 by A. V. Topchiyev, Member, Academy of Sciences, USSR

SUBMITTED: December 14, 1957

Card 3/3

BASHKIROV, A.N.; KAMZOLKIN, V.V.; SOKOVA, K.M.; ANDREYEVA, T.P.

Determination of primary and secondary higher alcohols of
the aliphatic series in their mixtures. Metod.anal.org.
soed.nefti,ikh smes. i proizv. no.1:170-177 '60. (MIRA 14:8)
(Alcohols) (Hydrocarbons)

38689

S/510/60/014/000/003/006
D244/D307

5.3300

AUTHORS: Kamzolkin, V.V., Bashkirov, A.N., Sokova, K.M., and Andreyeva, T.P.

TITLE: Composition of oxygen-containing compounds forming during the liquid phase aerial oxidation of n-pentadecane

SOURCE: Akademiya nauk SSSR. Institut nefti. Trudy, v. 14, 1960, Khimiya nefti, 65 - 75

TEXT: Results are presented of the study of the composition of the products of oxidation of n-pentadecane in the presence of boric acid. More oxygen was used in this work than previously (Bashkirov A.N., Khimicheskaya nauka i promyshlennost', 1, no. 3, 272 (1956)). The aim of the present investigation was to obtain additional data on the oxidative conversions of hydrocarbons and on some intermediate oxygen-containing compounds. It was found that the increase of O in the oxidizing gas from 3.5 % to 21 % doubles the quantity of O - containing compounds. At the same time the proportion of OH - containing compounds decreases from 70 % to 50 % and COOH - containing compounds increase from 12 % to 31 %. The amount of carbonyl com-
Card 1/2

BASHKIROV, A.N.; KAMZOLKIN, V.V.; SOKOVA, K.M.; ANDREYEVA, T.P.;
KORNEVA, V.V.; ZAKHARKIN, L.I.

Synthesis of cyclododecanol by the liquid-phase oxidation
of cyclododecane. Neftekhimiia 1 no.4:527-534 Jl-Ag '61.
(MIRA 16:11)

I. Institut neftekhimicheskogo sinteza AN SSSR i Institut
elementorganicheskikh soyedineniy AN SSSR.

KAMZOLKIN, V.V.; BASHKIROV, A.N.; SOKOVA, K.M.; MARTYNES, M.; ANDREYEVA, T.P.

Transformations of higher aliphatic alcohols during their
liquid phas oxidation. Neftekhimiia 1 no.5:675-682 S-0 '61.

(MIRA 15:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Alcohols)(Oxidation)

ZAKHARKIN, L.I., KOREVA, V.V., KUMITSTERAYA, G.M., BASHIKOVA, A.N.,
KANZOLIKH, V.V., SOKOVA, K.H.

New monomer for the production of the synthetic fiber dode-Kalaktan.

Report to be submitted for the 12th Conference on high molecular weight compounds
devoted to monomers, Baku, 3-7 April 62

ZAKHARKIN, L.I.; KORNEVA, V.V.; KAMZOLKIN, V.V.; SOKOVA, K.M.;
ANDREYEVA, T.P.; BASHKIROV, A.N.

Preparation of ω -dodecalactam from 1,5,9-cyclododecatriene.
Neftekhimia 2 no.1:106-109 Ja-F '62.

(MIRA 15:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Lactams) (Cyclododecatriene)

KAMZOIKIN, V.V.; BASHKIROV, A.N.; SOKOVA, K.M.; ANDREYEVA, T.P.

By-products of the liquid-phase oxidation of cyclododecane with
molecular oxygen in the presence of boric acid. Neftkhimiia
4 no.1:96-99 Ja-F'64 (M'RA 17:6)

1. Institut neftekhimicheskogo sinteza AN SSSR imeni A.V.
Topchiyeva.

KAMZOLEVA, V.V.; KALININA, A.A.; LAVREK, N.N.; KURSOVSKA, T.L.; ZHUKOVA, G.A.

Concerning the position of carboxyl groups in the cyclic intermediates formed in the liquid-phase oxidation of γ -butyrolactone in the presence of boric acid. Neftekhimika 4 no.4;598-602 JI-Ag - 162.

(Mende Zvezda)

I. Institut naftokhimicheskogo sinteza im. A.V. Topchil'yeva Ak. SSSR.

L 36476-65 EPF(c)/EWP(j)/EWT(m) Pe-4/Pr-4 RM

ACCESSION NR: AP5010006

UR/0204/64/004/004/0599/0602

AUTHOR: Kamzolkin, V. V.; Bashkirov, A. N.; Sokova, K. M.; Andreyeva, T. P.; Zelenaya, G. A.

TITLE: Position of hydroxyl groups in cyclododecanediols, formed in the liquid phase oxidation of cyclododecane in the presence of boric acid

SOURCE: Neftekhimiya, v. 4, no. 4, 1964, 599-602

TOPIC TAGS: oxidation, decane, catalysis, boric acid, carboxylic acid, oxygen

Abstract: In the oxidation of cyclododecane with molecular oxygen in the presence of boric acid, cyclododecanone (8-10%) and high-boiling oxygen-containing compounds (12-14%), consisting chiefly of polyfunctional compounds, including a mixture of cyclododecanediols and their complex esters with hydroxy- and dicarboxylic acids, are formed in addition to cyclododecanol (approximately 80% yield). The position of the hydroxyl groups was determined in the cyclododecanediols produced in this reaction. The oxidation of the diols with nitric acid was found to proceed chiefly at the hydroxyl groups, and therefore was suitable for establishing their position in the molecule. It was found that the investigated diols represent a mixture of all possible isomers, chiefly the 1,6- and 1,7-cyclododecanediols. The 1,2-, 1,3-, and 1,4-isomers are formed in smaller amounts (approximately

Card 1/2

L 36476-65

ACCESSION NR: AP5010006

50% of the 1,6- and 1,7-diols). Orig. art. has 1 table.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR
(Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 29Nov63

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 003

OTHER: 001

JPS

Card 2/2

S/719/62/000/081/001/001
D204/D307

AUTHOR:

Sokova, K.P.

TITLE:

Methods of analysis and the chemical composition of monazite

SOURCE:

Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii. Trudy, no. 81, 1962, Metody khimicheskogo analiza mineralov, no. 2, 3 - 22

TEXT: This work was carried out to (1) develop an accurate method of analysis of monazite, (2) characterize chemically a number of monazites from various deposits, and (3) determine the formula for monazite, paying particular attention to the form of Th in the mineral, since the latter problem is still unresolved. Present methods of analysis are first reviewed. Decompositions with H_2SO_4 , $HClO_4$ and fused Na_2CO_3 are described, followed by a discussion of the separation of the rare earths and Th from phosphoric acid and other elements. Oxalate, ✓

Card 1/3

S/719/62/000/081/001/001

D204/D307

Methods of analysis and ...

methyl oxalate and fluoride methods are given in brief. Methods of determining SiO_2 and P_2O_5 are described, under various conditions. Sep-

rations of Th from the rare earths and its determination are treated in some detail. Assaying monazite for U is described. The author recommends the following procedure for analysis of monazite: (a) Decomposition with conc. H_2SO_4 , (b) determination of Pb as PbCrO_4 , (c) separation of the rare earths and Th from the remainder by the oxalate method, (d) separation of Th from the rare earths by the tannin method, (e) separation of Ce from the other lanthanons by precipitation as $\text{Ce}(\text{IO}_3)_4$, (f) separation of the cerium and yttrium groups, (g) determination of Ca as oxalate, (h) determination of Fe, Al, Mg, and Mn. Detailed step-by-step instructions for stages (a) - (h) are provided. Results of 20 analyses of Russian monazites are tabulated and discussed, the author concluding that 'monazite' comprises a group of minerals of general formula $\text{A}_2\text{B}_2\text{X}$, with isomorphous substitutions in A, B and X. $\text{Ce}_2\text{P}_2\text{O}_8$ and $\text{Th}_2\text{Si}_2\text{O}_8$ are regarded as the end members of this series, (Ce denotes total rare earths), with ThCaP_2O_8 and $[\text{Ce}, \text{Th}, \text{Ca}]_2$

Card 2/3

Methods of analysis and ...

S/719/62/000/081/001/001
D204/D307

[P, Si, S]₂ [O, OH]₈ as intermediates. There are 13 tables and
26 references.

Card 3/3

KALENOV, A.D.; ANIKEYEVA, V.I.; SOKOVA, K.P.

Case of a complicated replacement of loparite. Dokl. AN SSSR 152
no.1:183-190 S '63. (MIRA 16:9)

1. Predstavлено академиком D.S.Korzhinskим.
(Soviet Far East--Loparite)

STOYANOVSKIY, A.F.; SOKOVA, M.G.

Virulence of microbial associations in polluted water and its
relation at the recency of pollution; abuthors' abstract. Zhur.
mikrobiol.epid. i immun. 28 no.9:108-109 S '57. (MIRA 10:12)

1. Iz Odesskogo meditsinskogo instituta.

(WATER SUPPLY, microbiology,

virulence of microbial assoc. in polluted water & role
of time of pollution (Rus))

MINERVIN, S.M.; STOYANOVSKIY, A.F. [Stoianov's'kyi, O.F.]; SAVIN, V.R.; SOKOVA,
M.G. [Sokova, M.H.]

Possibility of detecting the botulinus toxin in water by the method
of determining the phagocytic index. Mikrobiol. zhur. 26 no.4:13-17
'64. (MIRA 18:10)

1. Odesskiy gosudarstvennyy meditsinskiy institut.

LUK'YANENKO, Viktor Grigor'yevich; OSVYATINSKIY, Valentin Nikolayevich;
SOKOVA, Mariya Ivanovna; TITOV, Vladimir Yevgen'yevich; NOVIK,
A.M., red.; MATUSEVICH, S.M., tekhn. red.

[Comparative tables for antifriction bearings] Sravnitel'nye
tablitsy podshipnikov kachenia. Kiev, Gostekhizdat USSR,
1962. 146 p. (MIRA 15:7)
(Bearings (Machinery))—Tables, calculations, etc.)

SOKOVA, N.A.; CHIZHOV, A.F.

Design of a laboratory setup for determining the atomic
recombination coefficients. Trudy TSAO no.46:85-90 '63.
(MIRA 17:1)

L 23505-65 EWT(1)/EWT(m)/EPF(c)/EWG(v)/FCC/EEC-4/EPR/EEC(t)/EWP(t)/
EWP(b)/EWA(h) Fo-4/Pe-5/Pq-4/Pr-4/Ps-4/Pi-4/Pae-2/Peb IJP(c) JD/WS/
ACCESSION NR: AT5001568 GW-2 S/2789/64/000/056/0009/0017

AUTHOR: Sokova, N.A., Fedynskiy, A.V., Chizhov, A.F.

TITLE: An investigation of the properties of the "omegatron" in measuring
the partial pressure of molecular nitrogen B+1

SOURCE Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 56, 1964. Fizika
vysokikh sloyev atmosfery. Teoriya i metody issledovaniya (Physics of high atmospheric
layers. Theory and methods of investigation), 9-17

TOPIC TAGS: omegatron, mass spectroscopy, high altitude mass spectroscopy,
ionosphere, ion pump, molecular nitrogen, nitrogen partial pressure

ABSTRACT: The characteristics of the omegatron mass spectrometer are examined
experimentally with a specific view to its application as a portable device for measuring
the partial pressure of molecular nitrogen in rarefied mixtures of atmospheric gases.
Some aspects of omegatron compatibility with certain measuring and evacuating systems
are discussed. The weight and dimensions of the omegatron have been reduced to make
its use in high altitude research feasible. The dimensions of the described omegatron
and its associated magnetic system are 220 x 115 x 80 mm.; the total weight is 3500

Card 1/3

L 23505-65

ACCESSION NR: AT5001568

grams. This omegatron differs additionally from that described by Chizhov (Trudy TSAO, No. 42, page 39, 1962) in the use of non-magnetic nichrome for the electrodes and the use of an additional diaphragm for adjustment of the electron beam. Optimum values of the working parameters are: $H = 2 \cdot 10^3$ gauss, accelerating voltage of the ionizing electrons 140 volts, collector voltage 0.4 volts, amplitude of the high frequency field 0.3 volts, emission current 5 ma. Resolution for masses of the order of molecular nitrogen is 7.5. Determination of the relative proportions of neon 20 and neon 22 in a gaseous mixture by measuring the ion current of the device is accurate to $\pm 10\%$ to a partial neon pressure of $5 \cdot 10^{-5}$ mm. Hg, which is no worse than measurements made using a model EMU-3 amplifying electrometer. In order to make absolute measurements, the device is calibrated by measuring the ion current as a function of introduced molecular nitrogen. In order to attain the desired stability of the current as a function of pressure, particular attention has to be paid to increasing electrical insulation (to prevent leakage losses), to improving the cleanliness of the electrode surfaces (to retard gaseous sorption effects) and to using a longer warm-up period before calibration. An evaluation of the distortion introduced by using the ion pump described by Kostko and Fedynskiy (Trudy TSAO, No. 46, 1963) is made.

Card 2/3

" 23505-65

ACCESSION NR: AT5001568

Comparative tables for the ion pump and oil and mercury diffusion pumps are given. It is concluded that sufficient accuracy is achieved with the ion pump for work with mass numbers of the order of molecular nitrogen. Orig. art. has: 8 figures and 2 tables.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central aerologic observatory)

SUBMITTED: 00

ENCL: 00

SUB CODE: ES, GP

NO REF SOV: 005

OTHER: 001

Card 3/3

L 00464-66 EWT(1)/FCC/EJA(h) GW

ACCESSION NR: AT5013406

UR/2789/65/000/061/0028/0043

45

42

B+1

AUTHOR: Sokova, N. A.; Chizhov, A. F.

44,55

TITLE: Use of the mass spectrometric technique for determining partial densities and temperatures of the components of the upper atmosphere

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 61, 1965. Fizika vysokikh sloyev atmosfery, teoriya i metody issledovaniya (Physics of high atmospheric layers, theory and methods of investigation), 28-43

TOPIC TAGS: mass spectrometer, upper atmosphere, upper atmosphere density,
upper atmosphere temperature

44,55 12

ABSTRACT: Analytical expressions were obtained which make it possible to calculate the absolute and relative partial densities of the components of atmospheric air both in the laboratory and in the free atmosphere from primary mass spectra. The expressions obtained can be used for processing mass spectra of atmospheric air. It is shown that many expressions are considerably simplified in various high-altitude intervals. A method of calculating the temperature of the free atmosphere for the case of multiple lines of the mass spectrum is proposed. It is shown that the omegatron is the most sensitive mass spectro-

Card 1/2

L 00464-66

ACCESSION NR: AT5013406

3

meter for measuring the temperature of the free atmosphere. The need for a more accurate experimental determination of the sensitivity coefficients S_{ij} and S'_{ij} is emphasized. Orig. art. has: 2 figures, 2 tables, and 51 formulas.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory) 44,55

SUBMITTED: 00 ENCL: 00 SUB CODE: ES,GP

NO REF SOV: 032 OTHER: 009

Card KC
2/2

SMELYANSKAYA,G.A.; KOYFMAN,B.Ye.; SOKOVA,O.A.; GORONOVICH,D.I.

Field method for testing corundum ores of the Semiz-Bugu deposit.
Sov.geol. no.21:102-107 '47. (MLRA 8:8)
(Semiz-Bugu region--Corundum)

SOKOVA, O.A.; GORONOVICH, D.I.

Testing the hardness of coal by the damping oscillation
method. Sov.geol. no.21:108-114 '47. (MIRA 8:8)
(Mica)

SOKOVA, O.A., studentka.

Clinical manifestation of acute serous toxic myocarditis. Vrach.
deleno no.3:307 Mr '57
(MLRA 10:5)

1. Kafedra propedevticheskoy terapii (zav.-prof. F.Ya. Primak)
Kiyevskogo meditsinskogo instituta.
(HEART --DISEASES)

KULIK, A. A., SOKOVA, O. I.

Hybridization, Vegetable

Changes in the biochemical characteristics of "Bizon" tomato effected by vegetative hybridization. Biokhimia, 17, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June, 1952 ~~1953~~. Unclassified.

KISELEVA, N.S.; SOKOVA, O.I.

Viability of tumor tissue following a three-year storage under
freezing conditions. Vop. onk. 10 no.2:108-110 '64.
(MIRA 17:7)

1. Iz laboratorii tsitogenetiki (zav. - doktor biologicheskikh
nauk Ye.Ye. Pogosyants) Instituta eksperimental'noy i klinicheskoy
onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. N.
N. Blokhin). Adres avtora: Moskva, I-llC, ulitsa Shchepkina, 61/2,
korpus 9, Institut eksperimental'noy i klinicheskoy onkologii AMN
SSSR.

KISELEVA, N.S.; SOKOVA, O.I.; KONSTANTINOVA, L.N.; POGOSYANTS, Ye.Ye.

Chromosome sets and the rate of tumor growth of two substrains
of the ascitic hepatoma of rats. Tep. onk. II no.4 scrl-65 '65.
(MIRA 16:8)

1. Iz laboratorii tsitogenetiki (zav. - doktor biol. nauk Ye.Ye.
Pogosyants) Instituta eksperimental'noy i klinicheskoy onkologii
AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR prof. N.N.
Biokhin).

SOKOVA, R.M.

Dehydration of petroleum by high-frequency currents. Neftianik
2 no.8:22-23 Ag '57. (MIRA 10:10)

1.Master vysokochastotnoy ustanovki obezvozhivaniya nefti promysla
No. 2 neftepromyslovogo upravleniya Tuyuzaneft'.
(Petroleum--Refining)

SIMOVIC, S.

Storage and care of military uniforms. p. 786.

Vojnički glasnik. Beograd, Yugoslavia. Vol. 3, no. 10, Oct. 1955.

Monthly List of East European Accessions (EFAI) LC, Vol. 6, no. 9, Sept. 1959.

Uncl.

BLACHENKO, V. A.; MOKOVLIN, L. I.

"Passive hemagglutination in influenza."

report presented at 4th Intl Cong, Hungarian Soc of Microbiologists, Budapest,
30 Sep-3 Oct 64.

Inst of Virology im D. I. Ivanovskiy, AMS USSR, Moscow.

KISSIN, I.G.; KULIBABA, F.V.; PAFFENGOL'TS, N.K.; POPOV, I.V., doktor geol.-mineral.nauk; SLAVYANOV, V.N.; SOKOVICH, L.M.; FANDEYEVA, V.I.; BOGOMOLOV, G.V., retsenzent; KOTLOV, F.V., retsenzent; PANYUKOV, P.N., retsenzent; PRIKLONSKIY, V.A., retsenzent; SOKOLOV, N.I., retsenzent

[Conditions in the area of the Kursk Magnetic Anomaly from the point of view of engineering geology and hydrogeology; data on the development of deposits using the open-pit mining method]
Inzhenerno-geologicheskie i gidrogeologicheskiy usloviia raiona kurskoi magnitnoi anomalii. Moskva, Izd-vo akad. nauk SSSR, 1960, 165 p. (Akademija nauk SSSR. Laboratoriia hidrogeologicheskikh problem. Trudy, no.28)

(Kursk Magnetic Anomaly--Mining geology)

SOKOVICH, V. A.

(The commercial operation of railroads; questions and answers) Moskva,
Transpechat' (1924) 161p.

Yudin HEL896.S68

SOKOVICH, V. A.

Obraztsov, V. I., Marek, D.P., Nadezhin, S. P., Sokovich, V. A. and
Shaul'skiy, F. I., "Importance of a Unified Technological Process in Railroad
Transportation and Method of Procedure." Edited by Academician V. N. Obraztsov,
Academy of Sciences USSR. (Section on Scientific Solution of Transportation Prob-
lems, Academy of Sciences USSR, 1949, 160 pp, 1,500 copies.

SOKOVICH, V. A.

USSR/Academy of Sciences - Book, Minin:

Jul 50

"Review of book, 'Essence of the Unit Technological Process in Railroad Transportation and Its Procedure and Execution,'" P. O. Sadikov

"Iz Akad SSSR, Otdel Tekh Nauk" No 7, pp 1099-1101

Reviews subject book by Acad V. N. Obraztsov, D. P. Marek, S. P. Nadezhin, V. A. Sokovich, and F. I. Shaul'skiy. States more than 80% of all freight is carried by trains.

162T2

ACC NR: AR7002215 (A,N) SOURCE CODE: UR/0271/66/000/010/A068/A068

AUTHOR: Sokovich, V. Yu.

TITLE: Universal automatic device for protecting metal equipment from corrosion by stray currents

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 10A457

REF SOURCE: Pribory i ustroystva s dstv avtomatiki i telemekhan. Resp. mezhved. nauchno-tekhn.sbz., vyp. 1, 1965, 30-37

TOPIC TAGS: corrosion protection, potentiometer, oscillograph, stray current, ELECTRIC CURRENT, ELECTRIC POTENTIAL, ELECTRIC EQUIPMENT, METAL PHYSICAL PROPERTY

ABSTRACT: All USSR anticorrosion devices for metal structures have operational characteristics which remain unchanged during the time between adjustments. This leads to systematic deviations in their optimum performance efficiency, since the instability of external conditions, especially in the field of stray currents is the specific feature of the work of the protection device. Oscillograms of metal-ground potential and drainage current for a fixed short period of time are present-

Card 1/2

UDC: 62-55:620.197

ACC NR: AR7002215

ed with diagrams of changes of the mean values of these potentials for periods of 24 hr and a year. From this material it is apparent that the potentials fluctuate considerably around the daily means. A device capable of maintaining the equipment-ground potential constant by adjustment of its operational parameters to the changes in external conditions was built at the Khar'kov Institute for Mining Engineering, Automation, and Computer Technology, and it is described. The adjustment is achieved by connecting into the protection circuit a controlled voltage source. The value of the potential required is set on a dial linked to the arm of a potentiometer. The operation of the unit under various conditions is described and pertinent oscilloscopes illustrating the test data are presented. The latters show that an acceptable accuracy is controlling the potential has been achieved. Orig. art. has: 3 titles, and 12 illustrations. [Translation of abstract] [KP]

SUB CODE: 14, 09/

Card 2/2

L 55242-65 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T-2/EWP(k)/EWA(h) Pf-h/Peb WW/EM
ACCESSION NR: AP5015553 UR/0286/65/000/008/0097/0098
629.135/138

23

B

AUTHOR: Grigor'yev, I. I.; Sokovikov, Yu. G.

TITLE: Device for altering the flapping controller angle. Class 62, No 170304

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 97-98

TOPIC TAGS: flapping angle controller, swash plate

ABSTRACT: An Author Certificate has been issued for a device for altering the flapping angle of the controller, which consists of a blade guide, connecting rod, and rotating swash plate. To decrease the clearance in flight between the main rotor blades in coaxial helicopters, the blade guide has a slot in which a thrust bearing and one end of the connecting rod are displaced by a drive mechanism. This connecting-rod end changes the flapping-controller angle; its other end is also displaced by a drive mechanism along a slot in a bracket on the rotating swash plate. (See Fig.1 of Enclosure.)

Orig. art. has: 1 figure.

[WH]

ASSOCIATION: none

Card 1/3

L 55242-65

ACCESSION NR: AP5015553

SUBMITTED: 24Oct64 ENCL: 01 SUB CODE: AC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4022

Card 2 / 3

L.55242-65

ACCESSION NR: AP5015553

ENCLOSURE: 01

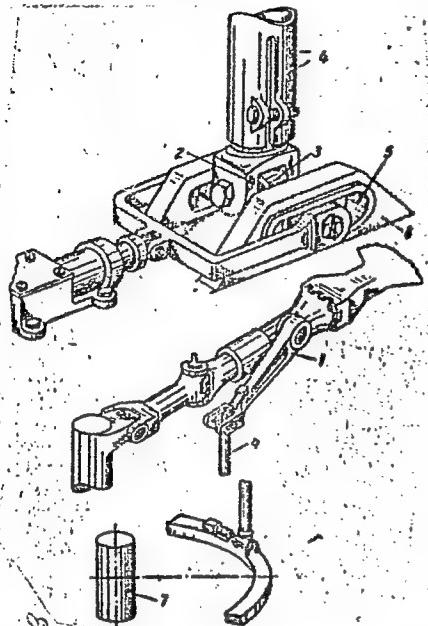


Fig. 1. Device for altering the flapping-controller angle

1 - Blade guide; 2 - slot;
3 - thrust bearing; 4 - connect-
ing rod; 5 - slot; 6 -
bracket; 7 - rotation of
swash plate.

L 04620-67 EWT(1)/EEC(k)-2/T/EWP(k) IJP(c) NG
ACC NR: AP6034423 SOURCE CODE: UR/0386/66/004/008/0303/0307

AUTHOR: Sobolev, N. N.; Sokovikov, V. V.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: A mechanism ensuring level population inversion in CO₂ lasers

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniya, v. 4, no. 8, 1966, 303-307

TOPIC TAGS: gas laser, laser theory, neon, carbon dioxide, electron interaction

ABSTRACT: Population inversion of the CO₂ molecules in a CO₂-N₂ laser by resonant energy transfer from the N₂ molecules in the first vibrational level, and the cause of the large population of the first vibrational level of N₂, are explained by the authors in a natural fashion by using the results of G. J. Schulz (Phys. Rev. v. 135, A988, 1964 and earlier) and I. D. Swift (Brit. J. Appl. Phys. v. 16, 837, 1965). The explanation is based on the hypothesis that the vibrational levels are excited by electron interaction, since their results demonstrate that the average electron energy in the discharge, under conditions close to those prevailing in a CO₂-N₂ laser, will not exceed 1.5 - 2 ev. This denotes, when account is taken of the large (e, N₂) collision cross section, that the main cause of the appreciable concentrations of N₂ in the excited vibrational states is direct electron excitation. Furthermore, any vibrational quantum of N₂, not only the first, can go over to the CO₂ molecule, leading in

Card 1/2

L 04620-67

ACC NR: AP6034423

final analysis, to predominant population of the first vibrational level. The possibility that even the high vibrational levels of N₂ can effectively excite the upper laser level of CO₂ explains the large efficiencies and powers of the laser with the CO₂ + N₂ mixture. The lasing mechanism of a pure-CO₂ laser is assumed to be due to the large number of CO molecules produced by the electric discharge. It is proposed that the role played by N₂ in the CO₂-N₂ mixture is played by CO in the CO₂-CO mixture. The increase in lasing power following addition of He to the CO₂-N₂ mixture or to CO₂ also finds a natural explanation, since helium has the highest ionization potential and the highest gas-discharge electron temperature of all the gases involved. Addition of He to CO₂ or to a CO₂-N₂ mixture leads to an increase in the average electron energy, up to values close to the energies corresponding to the maximum cross sections of the (e, CO) or (e, N₂) interaction. An "equalization" of the distribution function, i.e., compensation of the electrons knocked out of the discharge by resonant interaction with the N₂ and CO, is also possible. It is noted in conclusion that addition of He to CO₂ or to a CO₂-N₂ mixture not only leads to an increase in the population of the upper laser level, but also to a decrease in the population of the lower laser level, as confirmed by the experimentally observed decrease in the intensity of spontaneous emission from the lower laser level of CO₂ upon addition of He to a CO₂-N₂ mixture. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 16Jul66/ ORIG REF: 001/ OTH REF: 011/ ATD PRESS:
5100

Card 2/2 LC

ALEKSANDROVICH, E.-G.V.; SOKOVISHCH, V.A.; SAZANOV, A.I.

Hand-operated universal catharometric leak detector. Prib. i
tekh. eksp. 8 no.5:162-164 S-0 '63. (MIRA 16:12)

ACCESSION NR: AP4018370

S/0120/64/000/001/0085/0087

AUTHOR: Nasy*rov, F.; Sokovishin, V. A.

TITLE: Resolution of an argon ionization chamber with an admixture of water vapor

SOURCE: Pribory* i tekhnika eksperimenta, no. 1, 1964, 85-87

TOPIC TAGS: ionization chamber, argon ionization chamber, argon ionization chamber resolution, argon water vapor chamber resolution, argon water vapor ionization chamber

ABSTRACT: A grid-type pulse ionization chamber was filled with argon at 2 atm with a water-vapor admixture at a partial pressure of 2.3 to 0.5 torr (temperatures -8 to -24C). This combination yielded the highest resolution for a chamber having no collimating or focusing devices. The chamber voltage was 1 kv, with 25% of it on the grid. Variations within 0.8 - 1.2 kv, as well as

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ACCESSION NR: AP4018370

increasing the pressure to 3 atm, had little effect. Decreasing the pressure to 1 atm with a corresponding increase in the interelectrode separations resulted in some impairment to the resolving power. The pulse-height distribution of alpha-particles Pu²³⁸ and Pu²³⁹ with half-widths of the principal maxima of 42 and 50 kev, respectively, is reported. The conclusion is drawn that "the presence in argon of a considerable admixture of H₂O (up to 0.15%) does not impair, but rather improves the chamber characteristics." Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 07Mar63

DATE ACQ: 18Mar64

ENCL: 00

SUB CODE: NS

NO REF SOV: 001

OTHER: 003

Card 2/2

POMERANTSEV, V.V.; RUNDYGIN, Yu.A.; SOKOVISHIN, Yu.A.

Approximate theory of the combustion and gasification of a
fuel layer. Inzh.-fiz.zhur. 4 no.8:11-19 Ag '61. (MIRA 14:8)

1. Politekhnicheskiy institut imeni M.I.Kalinina, Leningrad.
(Combustion, Theory of)

27556
S/170/61/004/010/011/019
B108/B102

26.2532

AUTHORS: Ozhigov, G. Ye., Smirnov, V. G., Sokovishin, Yu. A.

TITLE: Production of a thermopile and a method to determine its time constant experimentally

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 10, 1961, 90-96

TEXT: Following a suggestion by B. G. Smirnov, the authors prepared 2 - 4 μ thick and some 0.3 mm wide thermocouples by electroplating. A stainless steel cylinder with a spiral engraved at a pitch of 0.3 mm was plated with copper on one and with nickel on the other half. The spiral groove was previously filled with shellac so that the plating would come off readily in the form of a wire, half copper and half nickel. The resistance of each of these thermocouples (16 mm long) was 0.6 ohm. Thermopiles consisting of 5 to 25 junctions were assembled. The hot junctions were blackened with antimony or bismuth. The sensitivity of one junction to steady radiation is between 0.23 and 0.31 mv.cm²/watt, the relaxation time $\theta_{0.63} = 0.02$ sec. R. R. Kharchenko ("Elektrichestvo", 11,

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27556
S/170/61/004/010/011/019 +

Production of a thermopile and a method ... B108/B102

47, 1955) had already given an exact equation for a highly damped galvanometer or an oscillator ($\beta \gg 2$). From this equation, the authors derive a formula for determining the relaxation time θ of a thermopile

from oscillograms of an oscillator with a natural frequency $\omega_0 \approx \frac{2\pi}{\theta}$.

This formula reads as follows:

$$\frac{y}{y_{\max}} = 1 - \exp(-t/m) \left\{ 1 + \frac{t}{m} \left[1 + \frac{t}{2m} + \frac{t^2}{6\theta^2} + \frac{t^2}{6m^2} - \frac{t}{2\theta} \left(1 + \frac{2t}{3m} \right) \right] \right\}.$$

y denotes the deflection of the oscillator, $m = 2\beta/\omega_0$. The error is the least when time t is measured in the oscillogram of transients at a relative coordinate y/y_{\max} of between 0.63 and 0.80. In this case, the

error amounts to $\pm 5\%$. The authors checked their method experimentally and found good agreement between theory and experiment. Professor K. I. Strakhovich is thanked for valuable advice, Engineer L. P. Osipova for having determined the amplitude-frequency characteristics of the K-12-21 (K-12-21) oscilloscopes. There are 2 figures, 1 table, and 5 Soviet references.

Card 2/3

41312

S/170/62/005/010/005/009
B104/B186

20 147

AUTHORS: Strakhovich, K. I., Sokovishin, Yu. A.

TITLE: Discharge of a laminar jet of conductive gas into a magnetic field

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 10, 1962, 65 - 69

TEXT: This is studied by the methods of laminar boundary layers and jet streams. The gas jet is assumed to be discharged from a narrow slit of infinite length and to flow into the same gas kept at a constant pressure. γ , σ and μ are constant. Thermal effects and gas ionization are neglected. The equation of motion

$$\begin{aligned} \bar{u} \frac{\partial \bar{u}}{\partial \bar{x}} + \bar{v} \frac{\partial \bar{u}}{\partial \bar{y}} &= \frac{\gamma}{u_0 l} \frac{\partial^2 \bar{u}}{\partial \bar{y}^2} - \frac{\sigma \mu^2}{\rho u_0} l H_0^2 \bar{u} \bar{H}^2 \\ \frac{\partial \bar{u}}{\partial \bar{x}} + \frac{\partial \bar{v}}{\partial \bar{y}} &= 0, \quad \frac{\partial \bar{H}_x}{\partial \bar{x}} + \frac{\partial \bar{H}_y}{\partial \bar{y}} = 0 \end{aligned} \quad \left. \right\} (3)$$

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S/170/62/005/010/005/009
B104/B186

Discharge of a laminar jet...

of the gas in the reduced variables

$$\bar{x} = \frac{x}{l}, \quad \bar{u} = \frac{u}{u_0}, \quad \bar{y} = \frac{y}{l}, \quad \bar{v} = \frac{v}{u_0},$$

$$\bar{H} = \frac{H}{H_0}, \quad \bar{H}_y = \frac{H_y}{H_0}, \quad \bar{H}_x = \frac{H_x}{H_0}.$$

is transformed to the system

$$\frac{\partial \bar{\psi}}{\partial \bar{y}} - \frac{\partial^2 \bar{\psi}}{\partial \bar{x} \partial \bar{y}} - \frac{\partial \bar{\psi}}{\partial \bar{x}} \frac{\partial^2 \bar{\psi}}{\partial \bar{y}^2} = \frac{1}{Re} \frac{\partial^3 \bar{\psi}}{\partial \bar{y}^3} - N_0 \bar{H}^3 \frac{\partial \bar{\psi}}{\partial \bar{y}}, \quad (6),$$

$$\frac{\partial \bar{H}_x}{\partial \bar{y}} = \frac{d \bar{H}}{d \bar{x}} - Re_m \bar{H} \frac{\partial \bar{\psi}}{\partial \bar{y}}, \quad (7)$$

by introducing the dimensionless parameters

$$Re = \frac{u_0 l}{\nu}, \quad Re_m = \sigma \mu u_0 l, \quad N_0 = \frac{\sigma \mu^3}{\rho u_0} l H_0^2 \quad (4)$$

and the dimensionless stream function $\bar{\psi}$. This system is solved with the following boundary conditions: (a) on the jet axis ($\bar{y} = 0$), $\bar{v} = 0$,
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$\frac{\partial \bar{u}}{\partial \bar{y}} = 0$, $\bar{H}_x = 0$; (b) if $\bar{y} \rightarrow \infty$, $\bar{u} = 0$; (c) at a great distance from the slit $\bar{H}_x = \bar{H}_y = 0$. From this system the principle of linear momentum $\bar{H}_x^{2-p+q} \bar{y}^p = \frac{ab}{N_0 f(\infty)} \int_0^\infty \{f'(\eta)\}^2 d\eta = \text{const}$ is derived.. This equation is possible only if $\bar{H} = x^n$, where $n = (p-q-1)/2$. a, b, p and q are constants. On the condition that $p = 0$, $q = 1$, and $n = -1$ the solutions

$$\bar{u} = \frac{3}{2} \frac{N_0}{\bar{x}} \left(1 - \tanh^2 \frac{\eta}{2} \right) \quad (17),$$

$$\bar{v} = \frac{3}{2} \sqrt{\frac{N_0}{Re}} \frac{\eta}{\bar{x}} \left(1 - \tanh^2 \frac{\eta}{2} \right) \quad (18)$$

are obtained for the velocity components,

$$\bar{H}_y = \frac{1}{\bar{x}} - \frac{\eta}{\bar{x}} \frac{1}{N_0 Re} \left(\eta + 3 Re N_0 \tanh \frac{\eta}{2} \right), \quad (22) \text{ and}$$

$$\bar{H}_x = - \frac{1}{\bar{x}} \frac{1}{\sqrt{N_0 Re}} \left(\eta + 3 Re N_0 \tanh \frac{\eta}{2} \right) \quad (23)$$

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B104/B186

for the components of the magnetic field and

$$Q = 2\rho \int_0^y u dy = 6\mu H_0 \sqrt{\rho v \sigma} \quad (19)$$

for the amount of fluid discharged per unit of time. At other values of n the equations of magnetohydrodynamics are not fulfilled.

ASSOCIATION: Politekhnicheskiy institut imeni M. I. Kalinina, g. Leningrad
(Polytechnic Institute imeni M. I. Kalinin, Leningrad) X

SUBMITTED: February 26, 1962

Card 4/4

STRAKHOVICH, K.I., prof. (Leningrad); SOKOVISHIN, Yu.A., inzh. (Leningrad)

Magnetogasdynamic generators of power systems. Elektrichestvo no.9:
15-22 S '63.
(MIRA 16:10)

STRAKHOVICH, K.I.; SOKOVISHIN, Yu.A.

Principal equations of electromagnetic thermal gas dynamics.
Trudy LPI no.228:7-19 '63. (MIRA 17:1)

L 17169-63

EWT(1)/EWG(k)/BDS/EEC(b)-2/ES(w)-2 AFFTC/ASD/ESD-3/

AFWL/IJP(C)/SSD Pz-4/Pab-4/Pi-4/Po-4 AT

ACCESSION NR: AP3004296

S/0170/63/006/007/0088/0093 82

81

AUTHOR: Strakhovich, K. I.; Sokovishin, Yu. A.

TITLE: Investigation of the distribution of temperature in a laminar jet of
a conducting gas escaping into space with a magnetic field

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 7, 1963, 88-93

TOPIC TAGS: laminar jet, conducting gas, energy equation, heat exchange,
kinematic viscosity, conductivity, magnetic permeability, Legendre equation

ABSTRACT: On the basis of an earlier solution for the escape of a laminar
flat heated jet of conducting gas into space with a magnetic field, the paper
studies "auto-model" solutions of the energy equation and proposes formulas
for temperature distribution. A paper by the authors in IFZh, No. 10, 1962,
discussed the problem of the escape of a laminar non-compressible isothermal
jet of conducting gas from a narrow fissure of infinite width into a quiescent
medium of the same gas in the presence of a magnetic field. The present

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ACCESSION NR: AP3004296

article studies the distribution of temperature in the jet with heat exchange, retaining the conditions of constancy of the coefficients of kinematic viscosity, conductivity, magnetic permeability and also heat capacity. The problem reduces to a solution of the Legendre equation with a free term and is analyzed for some particular values of Pr (= dimensionless criterion of similarity). The relation $\phi_1(\eta)$ is plotted and the equation of temperature distribution along the jet axis is given. The temperature distribution will differ from the constant external temperature T_{∞} only when there is a magnetic field. In its absence, the solution obtained is unreal, since the initial equations cannot be solved under the limit conditions fixed. The solution offered is restricted only by the limits of reality of the approximations of the boundary layer. Orig. has 19 numbered equations and one graph (change of the temperature function $\phi_1(\eta)$ at different Pr and n).

ASSOCIATION: Politekhnicheskiy institut imeni M. I. Kalinina, Leningrad (Polytechnical Institute)

SUBMITTED: 11Dec62
SUB CODE: PH
Card 2/2

DATE ACQ: 08Aug63
NO REF Sov: 005

ENCL: 00
OTHER: 000

L 65056-65 EWT(1)/EWP(m)/EPA(s)-2/EPA(sp)-2/EWG(v)/EWA(d)/EFA(w)-2/T-2/EVA(m)-2
ACCESSION NR: AR5006804 IJP(c) AT S/0196/65/000/001/A013/A013
621.311.25

SOURCE: Ref. zh. Elektrotehnika i energetika, Abs. 1A86

AUTHOR: Sokovishin, Yu. A. 44, 55

TITLE: Steady-state isothermal flow of the electroconducting gas in a MHD generator

CITED SOURCE: Uch. zap. aspirantov i soiskateley. Leningr. politekhn. in-t.
Energomashinostroyeniye. L., 1964, 3-8

TOPIC TAGS: MHD generator

TRANSLATION: A single-variable isothermal flow in the channel of a MHD generator is considered. Fringe effects are neglected as the channel electrodes are assumed to be solid and the channel infinitely long. Other assumptions: the induction is constant along the channel, no Hall effect is involved, plasma is not viscous, and boundary-layer effects are neglected. With the above assumptions, a set of equations of a stationary flow in relative units is developed. The system is quadrature-solved for two particular cases: (a) the channel cross-section and the electric conductance are constant; (b) the channel cross-section is constant, but the electric conductance is density-dependent. Bibliography: 5 titles.

Card 1/1M~~22~~ SUB CODE: EE, PR

34
B
44, 55 21
ENCL: 00

L 27772-65 EWP(m)/EPR/EWG(v)/EPA(w)-2/EWT(1)/T-2/EPA(sp)-2/EWA(m)-2/EWA(d)/ Pd-1
ACCESSION NR: AT5003381 Pe-5/Pi-4/Ps-4/ S/2563/64/000/232/0005/0008
Ps-4/Pab-10 IJP(c)

AUTHOR: Strakhovich, K. I.; Sokovishin, Yu. A.

TITLE: Uniform current of conducting gas in a magnetic and electric field

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 232, 1964. Turbomashiny (Turbomachines), 5-8

TOPIC TAGS: laminar flow, conducting gas, gas flow, electromagnetic field

ABSTRACT: The case of a laminar flow of conducting gas emerging from a narrow slit and mixing with a medium made of the same gas has been solved. The medium is within a transverse magnetic field, and the coefficient of kinematic viscosity ν , conductivity σ , and magnetic permeability μ ($\neq 1$) are assumed constant. The gas is assumed neutral in so far as there is no electric field due to the gas itself, while the applied electric field is also transverse. This brings the differential of laminar flow into the form

- a) $p = \text{const}$; $\rho = \text{const}$; $T = \text{const}$;
b) $u \frac{\partial u}{\partial x} + v \frac{\partial u}{\partial y} = - \frac{\partial u}{\partial y} - \frac{e u^2}{\rho} u H^2$;

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ACCESSION NR: AT5003381

$$1) \frac{\partial u}{\partial x} + \frac{\partial v}{\partial y} = 0; \vec{H} = H \vec{j}; \frac{\partial \vec{H}}{\partial z} = 0; \frac{\partial \vec{H}}{\partial t};$$

$$2) \operatorname{div} \vec{H} = \frac{\partial H}{\partial y} = 0; \vec{j} = \omega [\vec{u} \vec{H}] = \operatorname{rot} \vec{H}; \omega u H k = \frac{\partial H}{\partial x} k. \quad (1)$$

It follows that u is $u(x)$ only and $\partial u / \partial y = 0$, i.e., the motion under study is not dependent on viscosity. A full analysis of the solutions of system (1) is tedious and complicated, and the authors suggest that the most rational approach would probably be to study the solutions presented in the paper for definite values of this similarity criterion. Orig. art. has: 19 formulas.

ASSOCIATION: Leningradskiy politekhnicheskiy institut imeni M. I. Kalinina (Leningrad polytechnic institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: ME, EM

NO REF Sov: 001

OTHER: 003

Card 2/2